P02285US5 (ISURF 2159 P1P2)
ROTHSCHILD, et al.
PROLACTIN RECEPTOR GENE AS
GENETIC MARKER FOR INCREASE
LITTER SIZE IN ANIMALS
Sheet 1 of 5

AAGTCAACAA AGATGGAGCA CTGGCGTTGC TCCCAAAACA GCAGGAGAAC
GGCGACCGGC CGGAGAAGGC TGGCGCCCCT GAAACCAGCA AGGAATACG
CCCAGGTGTC CCGGGTGATG GATAACCACA TCCTGGTGTT AGTGCAGGAT
CCGCGAGCTC GAAACGTGGC TCCGTTTGAA GAACCAACCA AGGAGACCCC
GCCATCCCGG CCGCAGAATC CAGCTGCGAA AGACCTGGCC G/AGCTTCACCA
CGGCCCCGGG CCACTGCAGA CACCCGCTGG GTGGGCTGGA TTACCTCGAT
CCCGCAGGCT TTATGCACTC CTTTCAGTGA GAGCTTGGTT CATGGGATGA
TGGGTTACAA GGTGGGGTTT TTTTCAGGTC GCACTACGTG AAATGCACTC
TACCAGAGAA AGCTCGAAAA TGGGGTTAGA ATGACACTAC CCAGACTCAC
AGTTCACTCC TCTTCATGCT CCATTTTCAA CCACTTGCCTCTT

G/A=G or A at polymorphic site

Fig. 1

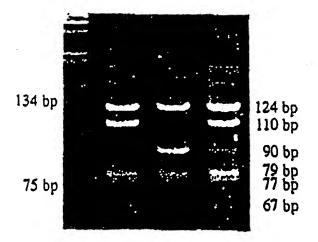
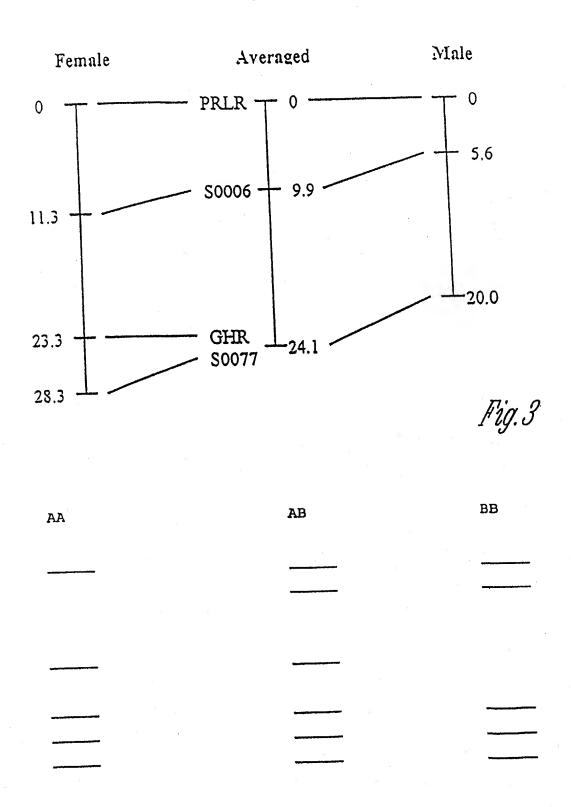


Fig.2

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1	GATTATTGTC	TGGGCAGTGG		TCTTCTCTGT	CTATCNACCC	CCCTCCCATT	60
61	CATGGCTCTC	AGGGTATAAT	GGCCAAAAAA	AAGACAAGAC	AAAAATGATG	GAAACCTACA	120
121	GATAATTYAA	GCACCTCATT	TTGCCATTAG	CTGCATTAGC	CATAAAAAAA	A	180
181	AAAAA	AAAACCTTTT	CTCAGTGCTA	GAAAAAAACA	GAATAGACTC	ATTTGAAACT	240
241	GATCTTCTCT	CTACCAAAGG	GAGTAGCGCA	GTTGTGAAAT	AGTAAACGTC	TGACAAGAAC	300
301	AGCAAATAAT	CCCACTAGTA	ATTTCAGAAT	CCGCCTCCTC	AATTAGCCAG	AATTCACTGT	360
361	GATGCTGGCC	TCTATAATTA	TTATTTGTCT	TCACCACTGA	TTAGTTTCAC	ATCATGAAAA	420
421	TTGCATGTCA	TTTAGTTTCA	CRTAGCCTCA	GAACCAACCC	TAATTCCTAC	CTGCCATATC	480
481	CCTGTAGCAG	CTATTCGAAG	ATCACAAGGT	GGGAACATGT	GTYATTTATC	TTTTCTCTTA	540
541	CATTATTTTA	GAGCATGGTG	GCCTGCATCC		GGGCCAAAAA	TAAAAGGATT	600

Fig.5

HinFI
Genotype: 1/1 1/2 2/2
103bp
86bp





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Genotype: <u>1/1</u>	<u> НруСН4IV</u> <u>1/2</u>	<u>2/2</u>
300+bp ~300bp		
~165bp ~155bp		

Fig. 7

Genotype:	1/1	<u>1/2</u>	2/2
281bp			
~140bp			





P02285US5 (ISURF 2159 P1P2) ROTHSCHILD, et al. PROLACTIN RECEPTOR GENE A GENETIC MARKER FOR INCREASED LITTER SIZE IN ANIMALS Sheet 5 of 5

Sequence 5' to 3' for porcine PRLR Sequence

GTACACACA ACACACACA ACACACACAC ACACACACC GTTAAGCTNT CTTTCTGAAT CATGCCNACC CGAGGGCCAC CCATAGAGGA GTGTGGTGGA GGGTGCTTG GCACTTCTGA GCCCTGCATC CCTACACCCA CTACACCCA GATGTCATA TTGACTCCAG TCGCTCTG CTTTTCTGA GCCCTGCATC CTACACCCA TCTGCTTCTG TCACCAGCAG AATGGTCCAG CTCATTGAGCG GACCTTCATA TTGACTCCAG TGGCTTCTG CTTTTTCTAG GACAGTCACC TCCGGGAAAA CCCTGAGATCT TCACAACTAG ACGCTGACTT ACCAACAGA AGGAACACT TCGCCTGCTG GTGGAGCCG GGGCGGATG CCACACGAGT GTTCTCTCT TGTGGGCCAG AGGAACACT CTCTGGGTT AGAACTGCCT CGCTTTGGAG TTCCCGTCAT GGCTCAGTG TAACGAATC

Human exon 4

gacagttacetcetgg aaaacetgag atetttaaat gtegttetee caataaggaa acatteacet
getggtggag geetgggaca gatggaggae tteetaceaa ttatteactg aettaceaca
gggaagg

Alignment																																			
Hsap	g G	а		n a Q		t	t L	а		c P	t		c P	t g	g G		а	a K		С	c P	t	g	a E	g	а	t I	С		t F	t		a K	а	t
pig	?	а	С	а	g	t	c S	а	С	С	t		c P	g 9	9 9	a	а	а	а	С	С	t	g	а	g	а	t	С	t	t F	С	а	а	а	t
Hsap	g C	t	С	g R		t	c S	t	С	c P	С		a N	ta	a a		g	a E		a	c T	а		t F	С	а	c T		t	g	С	t	g	g	t
pig	g	t	С	g	t	t	C	t	С	С	С	g	a E	a a	aa	ıg	g	а	a	а	С	а	t	t	С	g	c A		t	g	С	t	g	g	t
Hsap	g	g	а	g R	g	С	c P	t	g	g G			c T			a t	g	g G		g	g G			t L	t	С	c P	t	а	c T		а	a N	t	t
pig	g	g	а	a K	_	С	c P	g	g	g	g	g	c A		ga	a t	g	g	а	g	g	а	С	t	t	С	С	t	а	С	С	а	a N	C	t
Hsap	a Y		t	c S		С	t L	g	а	c T		t	a Y			a (са	g R		g	a E		g	g G	i										
pig	?	_		C	-	С	ţ	g	а	С	t	t	а	С	c a	a (са	a		g	а	а	g	g											